

## CLAIMS

1. A manufacturing apparatus of a porous glass base material for depositing glass particles produced by subjecting a material gas to flame hydrolysis, onto a starting member placed vertically, wherein a plurality of gas inlets are provided in one or more lateral walls of a process chamber including a burner for the deposition therein, in upper portions of the lateral walls and along a ceiling of the process chamber.
2. The manufacturing apparatus according to Claim 1, wherein the plurality of gas inlets are provided in lateral walls that oppose each other with a porous glass base material being positioned therebetween.
3. The manufacturing apparatus according to Claim 1, wherein slit-like gas inlets are provided in the process chamber, along left and right edges of a lateral wall on which the burner is provided.
4. The manufacturing apparatus according to one of Claims 1 to 3, wherein an exhaust outlet is provided in a lateral wall that opposes the lateral wall on which the burner is provided.
5. The manufacturing apparatus according to Claim 4, wherein a width of the lateral wall in which the exhaust outlet is provided is smaller than a width of a lateral wall in which a gas inlet is provided.
6. The manufacturing apparatus according to one of Claims 1 to 4, wherein one of the gas inlets is provided in the lateral wall in which the exhaust outlet is provided, and a distance between a lowest part of the gas inlet and a highest part of the exhaust outlet is 30 mm or more.
7. The manufacturing apparatus according to one of Claims 1 to 6, wherein the ceiling and lateral walls of the process chamber along which a gas supplied from the gas inlets flows are formed by flat surfaces.